

#### 4. A NOTE ON INTER-PARTURITION INTERVAL OF SOME CAPTIVE WILD MAMMALS

A sound knowledge of all aspects of reproduction including inter-parturition interval of mammals is necessary for their successful breeding in captivity. It is also necessary for the successful planning of breeding programmes in Zoological Parks. Available literature revealed that there are not many reports on this subject. In this communication an attempt is made to present some information on inter-parturition interval observed among five species of wild mammals at Nandankanan Biological Park, Orissa during the period from 29-xii-1960 to 31-x-1973.

#### OBSERVATIONS AND DISCUSSION

##### AFRICAN LION (*Panthera leo*)

The details of inter-parturition interval observed in two females of this species are given in Table 1.

TABLE 1

Name of the lioness	Date of last parturition	Date of subsequent parturition	Inter-parturition interval	Period of separation of the female from the male from the date of last parturition mentioned in col. 3
"Chandrakanti"	26.iii.1967 (1st parturition)	17.vi.1969	2 years, 2 months and 21 days	About 18 weeks
"	17.vi.1969	9.xi.1970	1 year, 4 months and 22 days	About 6 months
"	9.xi.1970	3.iv.1971	4 months and 24 days	1 day
"	3.iv.1971	30.x.1972 (5th parturition)	1 year, 6 months and 26 days	About 5½ months
"Vijayanti"	8.ii.1970 (1st parturition)	19.vii.1970	5 months and 10 days	About 1 month
"	19.vii.1970	20.x.1971	1 year and 3 months	About 16 weeks
"	20.x.1971	17.ix.1973 (4th parturition)	1 year, 10 months and 27 days	About 5 months

From this table it can be seen that the inter-parturition interval observed in seven cases among two lionesses varies from 4 months and 24 days to 2 years, 2 months and 21 days with an average of 1 year, 3 months and 23 days. One female gave birth to five litters in a period of 5 years and 8 months whereas another female gave birth to 4 litters in a period of 3 years and 8 months. The minimum intervals of 4 months and 24 days (144 days) and 5 months and 10 days (160 days) were

possible as the females lost their cubs and were allowed to remain with the males within about one day and one month respectively from the date of last parturition.

Young are produced at intervals of at least 18 months to 2 years (Prater 1971). Asdell (1964) states that two litters may be born in a year. Most cats have one or two litters a year, the larger species sometimes breed only every two or three years (Walker *et al.* 1964).

#### TIGER (*Panthera tigris*)

The details of inter-parturition interval observed in two females of this species are given in Table 2.

TABLE 2

Name of the tigress	Date of last parturition	Date of subsequent parturition	Inter-parturition interval	Period of separation of the female from the male from the date of last parturition mentioned in col. 3
'Sikha'	30.xii.1966 (1st parturition)	31.vii.1967	7 months	About 1 month
„	31.vii.1967	10 iv.1971	3 year, 8 months and 9 days	About 7½ months (The female was kept separately from the male frequently as they fought)
„	10.iv.1971	14.xii.1972 (4th parturition)	1 year, 8 months and 3 days	About 9 months
'Rani'	7.xi.1971 (1st parturition)	2.iv.1972	4 months and 25 days	25 days
„	2.iv.1972	22.vi.1973 (3rd parturition)	1 year, 2 months and 19 days	About 9 months

From this it can be seen that the inter-parturition interval observed in five cases among two tigresses varies from 4 months and 25 days to 3 years, 8 months and 9 days with an average of 1 year, 6 months and 5 days. One female could produce 4 litters in about 6 years whereas another could produce 3 litters in 1 year and 8 months. The minimum intervals of 7 months and 4 months and 25 days (164 days) could be possible as the females lost their cubs and were allowed to remain with the males within about 1 month and 25 days respectively from the date of last parturition.

Most cats have one or two litters a year, the larger species sometimes breed only every two or three years (Walker *et al.* loc. cit.). In the wild the interval between two successive cubbings is about three years (Chaturvedi 1970). One tigress of New York Zoological Park produced 11 litters during the period from 1948 to 1959 and that park was in the practice of weaning the tiger cubs when they were between 3½ and

4 months old (Crandall 1965). According to Schaller (1972) in Zoos, where the cubs are usually removed from the mother at birth, one litter per year is common. At London Zoo a tigress had 8 pregnancies between 1961 and 1964 including 3 births recorded to this female during 1962 (Schaller loc. cit.). Schaller further states that a free living tigress that loses her cubs in some mishap is able to have a new litter within about 5 months.

#### LEOPARD (*Panthera pardus*)

The details of inter-parturition interval observed in three females of this species are given in Table 3.

TABLE 3

Name of the leopardess	Date of last parturition	Date of subsequent parturition	Inter-parturition interval	Period of separation of the female from the male from the date of last parturition mentioned in col. 3
'Sundari'	9.iv.1967 (1st parturition)	1.xii.1968	1 year, 7 months and 21 days	About 8 months
„	1.xii.1968	4.vi.1969	6 months and 2 days	4 days
„	4.vi.1969	31.v.1970	11 months and 26 days	About 14 weeks
„	31.v.1970	3.viii.1971	1 year, 2 months and 2 days	About 14 weeks
„	3.viii.1971	20.i.1973 (6th parturition)	1 year, 5 months and 16 days	About 8 months
'Rupa'	12.vi.1969 (1st parturition)	2.xi.1970	1 year, 4 months and 20 days	About 3 months
„	2.xi.1970	22.iv.1972	1 year, 5 months and 19 days	About 13 weeks
„	22.iv.1972	2.viii.1973 (4th parturition)	1 year, 3 months and 10 days	About 5 months
'Spotty'	20.i.1971 (1st parturition)	18.vi.1972	1 year, 4 months and 28 days	About 6 months
„	18.vi.1972	23.vii.1973 (3rd parturition)	1 year, 1 month and 4 days	About 6 months

From this table it can be seen that the inter-parturition interval observed in ten cases among three female leopards varies from 6 months and 2 days to 1 year, 7 months and 21 days with an average of 1 year, 2 months and 27 days. One female produced 6 litters in a period of 5 years and 10 months; a second female produced 4 litters in a period of 4 years, and 2 months whereas a third female produced 3 litters in a period of 2 years and 7 months. The minimum interval of 6 months and 2 days (184 days) was possible as the female was allowed to remain with the male within 5 days from the date of last birth.

A panther produced 3 litters in 3½ years in captivity (Prater loc.

cit.). Walker *et al.* (loc. cit.) state that most cats have one or two litters a year, the larger species sometimes breed only every two or three years.

NILGAI (*Boselaphus tragocamelus*)

The details of inter-parturition interval observed in three female nilgais are given in Table 4.

TABLE 4

Particulars of female Nilgai	Date of last parturition	Date of subsequent parturition	Inter-parturition interval	Remarks
Nilgai "A"	5.ii.1966 (1st parturition)	11.ii.1967	370 days	The females remained with the adult males along with there young throughout the period of observation.
"	11.ii.1967	13.iii.1968	395 days	
"	13.iii.1968	16.iii.1969	367 days	
"	16.iii.1969	30.i.1970	319 days	
"	30.i.1970	26.xi.1971	664 days	
"	26.xi.1971	1.ix.1973 (7th parturition)	644 days	
Nilgai "B"	31.xii.1970 (1st parturition)	12.ii.1972 (2nd parturition)	407 days	
Nilgai "C"	1.iv.1971 (1st parturition)	16.ii.1972 (2nd parturition)	320 days	

The inter-parturition interval observed in eight cases among the three females varies from 319 days to 664 days with an average of 436 days. One female produced 7 litters in a period of 7 years and 8 months.

The nilgai breeds immediately after dropping the calves (Asdell loc. cit.).

BLACKBUCK (*Antelope cervicapra*)

The details of inter-parturition interval observed in six cases among three females of this species are given in Table 5.

TABLE 5

Particulars of doe	Date of last parturition	Date of subsequent parturition	Inter-parturition interval	Remarks
Blackbuck "A"	20.ii.1972	6.ix.1972	198 days	The does and young remained with adult males throughout the period of observation.
Blackbuck "B"	22.ii.1972	9.ix.1972	199 days	
"	9.ix.1972	25.iii.1973	196 days	
"	25.iii.1973	9.x.1973	197 days	
Blackbuck "C"	25.viii.1972	8.iii.1973	194 days	
"	8.iii.1973	23.ix.1973	198 days	

From this table it can be seen that inter-parturition interval observed in this species varies from 194 days to 199 days with an average of

197 days.

In England the blackbuck breeds twice a year (Asdell loc. cit.). One fawn per year appears to be the rule among blackbuck (Schaller loc. cit.). According to Taibel (1937) one captive doe gave birth to 6 single fawns between June, 1931 and May, 1935 and another to 5 fawns between October, 1933 and February, 1937, less than a year elapsing between some births.

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#### 5. OCCURRENCE OF THE BRAHMINY DUCK (*TADORNA FERRUGINEA*) IN COIMBATORE DISTRICT

A Brahminy Duck was shot by my son on 10-xi-1974 in the Big Tank at Udumalpet about 45 miles south of Coimbatore Town, from a small flock of eight ducks which were found in shallow water near the edge of the Tank.